Oberkochen, 2025

**Leitz DFC® extraction hoods - solutions for all industries**

**A technical report on developments and projects with extraction hoods by David Lindenbauer (Application Technology Leitz Riedau).**

**Production conditions in the machining industry are constantly changing. Factors such as ergonomics, energy and resource efficiency as well as fire protection, noise reduction and cleanliness are becoming increasingly important. To fulfil these requirements, Leitz provides versatile solutions with the DFC extraction hoods. The range of possible applications is as wide as the variety of materials, products and manufacturing processes. Each hood is individually customised to the user's requirements. This results in customised solutions that not only increase efficiency and safety, but also contribute to optimised working conditions.**

**DFC: Controlled chip flow as a proven concept**

Dust Flow Control (DFC) stands for controlled chip flow and has been used successfully in tools for years. The DFC extraction hoods are now the next step in this development. Initial tests have already shown that the combination of specially developed hoods and suitable tools significantly improves tool life. Many machines are equipped with simple and universal extraction hoods that are not adapted to the direction of rotation or the profile to be machined. Older machines in particular show that rudimentary hoods reduce efficiency. If the extraction hoods are too close to the tool, the chip can be thrown back by the hood and cut several times, resulting in shorter tool life and therefore higher costs. With specially adapted extraction hoods, machine costs and set-up times can be reduced and the tools utilised more efficiently.

**Abrasive materials require new solutions**

Modern floors often contain abrasive materials such as corundum. Conventional extraction hoods therefore wear out quickly, which can lead to problems on the chain conveyor, the guideways and the sensors. Leitz provides an innovative solution to this problem with exchangeable wear parts that can be replaced quickly and easily. This makes the hoods and machine more long-lasting and less maintenance-intensive. In addition to durability, ergonomics also play a decisive role. In a Scandinavian project, the focus was on a particularly lightweight construction. Thanks to a special combination of materials, the weight of the extraction hoods has been reduced by around 30 percent, which makes handling much easier for machine operators.

In addition to efficiency, the focus is increasingly on sustainability. Rising energy costs are a significant factor in the machining industry. A considerable proportion of the energy requirement goes into the extraction system and the energy requirement is particularly high for older machine types. One reason for this is that a standardised diameter of the suction tubes is usually used for all positions - regardless of whether it is a pre-milling process with large material removal or a finishing step with minimal material removal. In a project in Austria, a combination of optimised extraction hoods and speed-controlled fans achieved energy savings of around 10 percent - while maintaining the same extraction performance. This saving was achieved through process analysis and optimisation of air consumption. As a result, only as much energy is used as is necessary to dispose of the chips.

**Reducing noise for better working conditions**

Another major topic is improving workplace ergonomics by reducing noise. A large furniture manufacturer in Poland was able to reduce noise by up to 5dbA thanks to customised low-noise extraction hoods. The noise reduction was made possible by a special sandwich construction of the outer shell, which effectively dampens sound propagation.

The areas of application for extraction hoods extend far beyond the wood industry and are used for materials that could not be more different. In the processing of fibre cement, for example, conventional extraction hoods prove to be less durable. Leitz offers a solution for this with special armouring, which can increase the lifetime from a few days to more than a year and a half.

Another example is a German insulation manufacturer that received the largest Leitz extraction hood to date.

With a length of 1.6 metres, the extraction hood was developed for a splitting saw for mineral wool. The focus here was on the tool and shaft change, which is carried out using a crane. With the old version, the tools were repeatedly damaged when the shaft was inserted. Thanks to an optimised design, the shaft is now guided during lowering, thus preventing damage to the saws.

**Customer orientation as a success factor**

Each project is customised to the customer's needs in order to get the most out of it. Efficiency, durability and ergonomics are optimally combined to create sustainable and economical solutions. This is the secret of the success of Leitz DFC® extraction hoods - across all industries and worldwide.

**The company**

Founded in 1876 in Oberkochen, Southern Germany, the Leitz Group is the worldwide leading manufacturer of tools for industrial processing of wood, wood derived materials, plastics, compound materials and non-ferrous metals. The product spectrum covers the complete range of precision tools for automated machines. In a complete package of advisory services, approximately 3,000 employees pass on their experience of cutting tools to customers so meeting daily the requirements of a complete problem solver and producing service provider. Leitz products regularly are used in more than 150 countries.. Together with its two legally independent sister companies Boehlerit and Bilz, Leitz forms the globally active Brucklacher Group. With a total of 16 production sites, its own sales and service companies in 38 countries at 137 locations and an exclusive partner network, the Brucklacher Group is a global player represented on all continents. The Brucklacher Group employs over 4,000 people worldwide and generates an annual turnover of around 450 million euros.

**For more press information and high resolution images, contact:**

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Ein Bild, das Elektronik, Plattenspieler, Schallplatte, Mischpult enthält.

KI-generierte Inhalte können fehlerhaft sein.

ill. 1: The DFC extraction hoods from Leitz are specially adapted to the tools and thus significantly increase the tool life. (Photo: Leitz)Ein Bild, das Spielzeug, Maßstabsmodell enthält.

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ill. 2: A modular system customised for flooring production with individual adaptation to the machine environment and profiles. (Photo: Leitz)